UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, ILLINOIS 60604

DATE: NOV 25 2015

SUBJECT: CLEAN AIR ACT INSPECTION REPORT
Savoy Energy LP, Adrian, Michigan

FROM: Natalie Topinka, Environmental Scientist
AECAB (IL/IN)

THRU: Nathan Frank, Section Chief
AECAB (IL/IN)

TO: File

BASIC INFORMATION

Facility Name: Savoy Energy, Adrian 25 CPF

Facility Location: N Adrian Highway and Howell Highway, Adrian, MI

Date of Inspection: October 6, 2015

Lead Inspector: Natalie Topinka, Environmental Scientist

Other Attendees:
1. Scott Connolly, Environmental Engineer, US EPA Region 5
2. Jack Rokos, Operations Manager, Savoy Energy
3. Kristy Shimko, Geologist, MDEQ

Purpose of Inspection: Follow-up inspection of oil and water storage tank battery

Facility Type: oil and gas production wellpad

Regulations Central to Inspection: NSPS OOOO - Standards of Performance for Crude Oil and Natural Gas Production, Transmission and Distribution

Arrival Time: 1:00 pm
Departure Time: 2:00 pm

Inspection Type:

☐ Unannounced Inspection

☒ Announced Inspection

OPENING CONFERENCE

☒ Credentials Presented

☒ CBI warning to facility provided

The following information was obtained verbally from Jack Rokos unless otherwise noted.

Process Description:

The Adrian 25 facility is a gathering point for oil, produced water, and gas collected from 10 wells. The emulsion of oil/produced water/gas from each well passes through a heater treater, which separates the three phases. Gas is sent to the "J-T Plant," which removes the propane fraction from the gas stream. The J-T plant was installed in place of the mechanical refrigeration unit (MRU) that was onsite and which performed the same function prior to October 2014, and is housed in the same building that previously contained the MRU (photos 1740 and 1741). The propane is then stored in a 30,000 gallon storage vessel. Remaining gas is sent to the compressor and then to the sales line.

Liquids are separated into the oil and produced water fractions, and each type of liquid is sent to separate portions of the eight-tank battery. Four tanks store produced water and four store oil. The tanks are equipped with a common vapor collection line which pipes vapors from the tank headspaces to a flare for combustion. There is a one-way check valve on the vapor collection line that is supposed to keep vapors from the oil tanks from entering the headspace of the water tanks (photo 1747), but which allows vapors from the water tanks to enter the collection line and pass to the flare.

Staff Interview: We specifically asked questions about the flow of liquids to the tank battery. Mr. Rokos confirmed our observations that the oil flows to the tank battery in a single main line, with two lines branching off that line near ground level, and each of those lines branches near the top of the tanks to deliver oil to each tank. The oil input to each tank can be shut off (photo 1744 (valve open) and 1746 (valve closed)). The oil level comes to equilibrium between the tanks through connection pipes near the base of the tanks. Operators perform manual gauging of the tanks to determine liquid levels. Produced water is sent to the tank battery through a single line from near ground level, which then branches to two and then four lines at the top of the tanks. Incoming liquids to each tank can be shut off in the same manner as the input to the oil tanks.

TOUR INFORMATION

EPA toured the facility: Yes

Data Collected and Observations:

We climbed to the top of the tank battery to observe the thief hatches and pressure relief valves with and without the IR camera. We noted a petroleum odor on both catwalks (the one in the oil tank section of the battery and the one in the water tank section). With the IR camera, we noted leaking thief hatches on tanks 3 (video 1361), 7 (video 1363), and 8 (video 1362). The leak from the hatch on tank 7 was also visually observable without the IR camera due to refraction of the air from vapors. The pressure relief valve above tank 2 was leaking slightly, and so was a seal on the valve on the vapor collection line between the oil and water sections of the tank battery.

Field Measurements: were taken during this inspection.

- Videos were taken using a FLIR GF320 infrared camera. Video log is attached.

CLOSING CONFERENCE

Concerns: During our tour, we pointed out the leaking components to Mr. Rokos.

SIGNATURES

Lead Inspector: Natalie M. Ri Date: 11/25/15

Section Chief: [signature] Date: 11/25/15

Facility Name: Savoy Energy, LP
Facility Location: N Adrian Highway and Howell Highway, Adrian, MI
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APPENDICES AND ATTACHMENTS

- Media DVD attached

Photos		Videos	
1740	J-T plant	1358	PRV over tank 2
1741	J-t plant exterior	1359	check valve btwn oil and water tanks on vent lines
1742	tank battery exterior	1360	flare from top of tank battery
1743	oil input lines to tanks 2 & 4	1361	leaking thief hatch on tank 3
1744	oil input line on tank 4	1362	leaking thief hatch on tank 8
1745	oil input line on tank 4	1363	leaking thief hatch on tank 7
1746	oil input line on tank 2	1364	leaking thief hatch on tank 7
1747	vent line w/ check valve btwn oil and water tanks	1365	flare from ground level
1748	load-out rack w/ vent line in background		
1749	load-out vent line		
1750	water input line to tanks 6 & 8		
1751	water input line w/ shutoff closed		
1752	truck load out vent line to flare		
1753	truck load-out vent knock-out vessel		
1754	water input lines		
1755	plant panorama w/ lines		
1756	tank vent lines to knockout vessel, vent line		
1757	vent lines to flare. Rusty from load out, middle from storage vessels		
1758	new thermocouple panel - was reading ~750F but digital number does not show up in photo		